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Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) An apparatus for displaying image comprising
means for collecting image data of a person being examined,
means for forming a tomogram from said image data,
means for calculating at least one biological function data from said tomogram,
means for forming at least one functional image based on said biological function data,
means for forming a composite image by composing said tomogram and at least one of
the following images;
an operated image obtained by operating said functional images together,
a composite image obtained by composing said functional images together, said operated
image, and said functional image; and
display means capable of displaying said functional image, said operated image, said
tomogram and said composite image,
wherein the means for forming said functional image and the means for forming the
composite image work to display at least portions of the regions in said functional image and in
said operated image on an arbitrary gradation color scale corresponding to the evaluated value of
said biological function data, and other regions in said function image and in said operated image
are displayed in an arbitrary color which is not included in said gradation color scale, or are
displayed transparently, and said portions of the regions in the functional image are displayed by
an overlapped display.

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2. (currently amended) An apparatus for displaying image according to claim 1, wherein said composite image is displayed by any one of ~~an overlapped display,~~ a parallel display or a partial display.

3. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said functional image sets to zero the ratio of said functional image in other regions in said functional image.

4. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said functional image is capable of arbitrarily varying the gradation color scale allocated to said biological function data.

5. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said composite image is capable of arbitrarily setting the ratios of the functional images in said composite images and of said tomogram.

6. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said functional image specifies part of the regions in said functional image depending upon whether the image data value of said pixel unit lies inside or outside a predetermined range.

7. (previously presented) An apparatus for displaying image according to claim 1,

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wherein means for forming said functional image determines an arbitrary interested region in said functional image as region of interest in said functional image.

8. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said functional image renders the pixel values of the pixels of the image data on a predetermined window level and in a predetermined window width to be corresponded to conversion coefficients, and determines said gradation color scale based on the conversion coefficients.

9. (previously presented) An apparatus for displaying image according to claim 1, wherein means for forming said functional image determines the gradation color scale allocated to said functional image depending upon the pixel values of the pixels of the image data for each of RGB and upon various look-up tables to which the conversion coefficients are corresponded.

10. (previously presented) An apparatus for displaying image according to claim 1, wherein said biological function data is at least one of the blood flow function data as represented by blood volume, blood flow and mean transit time.

11. (currently amended) A method of displaying image comprising
a step of collecting image data of a person being examined,
a step of forming a tomogram from said image data,
a step of calculating at least one biological function data from said tomogram,
a step of forming at least one function image based on said biological function data,

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a step of forming an operated image by operating said function images together, for forming a composite image by composing said tomogram and at least one of the following images;

an operated image obtained by operating said functional images together,

a composite image obtained by composing said functional images together, said operated image, and said functional image; and

a display step capable of displaying said functional image, said operated image, said tomogram and said composite image,

wherein the step of forming said functional image and the step of forming the composite image work to display at least portions of the regions in said functional image and in said operated image on an arbitrary gradation color scale corresponding to the evaluated value of said biological function data, and other regions in said functional image and in said operated image are displayed in an arbitrary color which is not included in said gradation color scale, or are displayed transparently, and said portions of the regions in the functional image are displayed by an overlapped display.

12. (currently amended) A method of displaying image according to claim ~~[[1]]~~ 11, wherein said composite image is displayed by any one of ~~an overlapped display,~~ a parallel display or a partial display.

13. (previously presented) A method of displaying image according to claim 11, wherein the step of forming said functional image sets to zero the ratio of said functional image in other regions in said functional image.

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14. (previously presented) A method of displaying image according to claim 11, wherein the step of forming said functional image is capable of arbitrarily varying the gradation color scale allocated to said biological function data image.

15. (previously presented) A method of displaying image according to claim 11, wherein the step of forming said composite image is capable of arbitrarily setting the ratios of the functional images in said synthetic images and of said tomogram.

16. (previously presented) A method of displaying image according to claim 12, wherein the step of forming said functional image specifies part of the regions in said functional image depending upon whether the image data value of said pixel unit lies inside or outside a predetermined range.

17. (previously presented) A method of displaying image according to claim 12, wherein the step of forming said functional image determines an arbitrary interested region in said functional image as region of interest in said functional image.

18. (previously presented) A method of displaying image according to claim 11, wherein the step of forming said functional image renders the pixel values of the pixels of the image data on a predetermined window level and in a predetermined window width to be corresponded to conversion coefficients, and determines said gradation color scale based on the conversion coefficients.

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19. (previously presented) A method of displaying image according to claim 11, wherein the step of forming said functional image determines the gradation color scale allocated to said functional image depending upon the pixel values of the pixels of the image data for each of RGB and upon various look-up tables to which the conversion coefficients are corresponded.

20. (previously presented) A method of displaying image according to claim 11, wherein said biological function data is at least one of the blood flow function data as represented by blood volume, blood flow and mean transit time.